

ABSTRACT OF THE DISCLOSURE

Various integrated circuits (ICs) are provided. One IC includes bonding pads and an input output (I/O) region surrounding a core region. The I/O region includes I/O cells
5 having a width approximately equal to or less than a width of the bonding pads. The IC also includes core logic arranged within the I/O region. Another IC includes four rows of bonding pads. Each row is arranged parallel to a different side of a core region. I/O sub-regions are arranged proximate each side of the core region. Each I/O sub-region includes I/O cells and core logic. An additional IC includes a first I/O region surrounding
10 a core region and a second I/O region surrounding the first I/O region. The IC also includes bonding pads arranged outside of I/O cells in the first and second I/O regions. A width of the I/O cells is approximately equal to a pitch of the bonding pads.